

## **This set of Guidelines is a 'Living Document'.**

If you have implemented IWRM in your basin, and if you have found a 'Key for Success' please provide feedback so that your work can be included in future updates. As IWRM is an evolving process, these guidelines also have to evolve.

UNESCO IHP Secretariat URL <http://www.unesco.org/water/>







United Nations  
Educational, Scientific and  
Cultural Organization



International  
Hydrological Programme  
of UNESCO

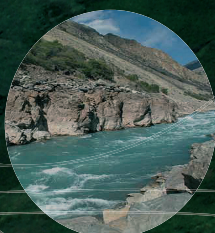


World Water  
Assessment Programme  
A contribution to the United  
Nations World Water Assessment  
Programme



# IWRM GUIDELINES at River Basin Level

PRESENTATION





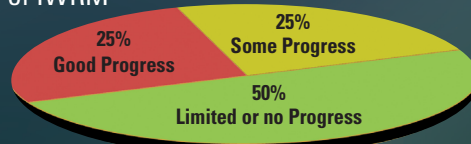
# Objectives and structure

The purpose of developing these Guidelines is to raise awareness and to facilitate the practical implementation of IWRM at the river basin level. Relying on available resources, the Guidelines will help the existing system work more effectively.

## STATUS OF IWRM

- Potential gap between concept and implementation
- Misunderstanding of IWRM

Implementation of IWRM Planning



UN-Water Status Report on Integrated Water Resources Management and Water Efficiency Plans, 2008

## GLOBAL ENHANCEMENT OF RIVER BASIN APPROACH

- Network of Asian River Basin Organizations (NARBO)
- EU - The Water Framework Directive
- International Network of Basin Organizations (INBO)

A river basin approach, in the implementation of IWRM, is being recognized as a comprehensive basis for managing water resources more sustainably and will thus lead to social, economic and environmental benefits.

## NECESSITY OF GUIDELINES

### at River Basin Level

## PART 1

Part 1 provides the basic principles and benefits of IWRM at the river basin level and is mainly targeted at **policy-makers**. It explains why the basin, in the context of adaptation to local and global change and disasters, and environmental conservation, is an appropriate unit for integrated management. Important conditions for water managers are also introduced.

## Principles

Part 2 is intended for use by IWRM **practitioners**. Part 2-1 and Part 2-2 are compiled from the point of view of comprehensive coordination of IWRM at the basin level.

Part 2-3 is prepared from the point of view of irrigation practitioners as representatives of water users. This document invites them to actively participate in IWRM.

## PART 2

### 2-1 The Guidelines for IWRM Coordination

### 2-2 The Guidelines for Flood Management

### 2-3 Invitation to IWRM for Irrigation Practitioners

Sequel to Part 2 is to be produced, and will comprise examples of implementation. (e.g. 'Environment', 'Water supply and Sanitation' and 'Adaptation to climate change')





What's  
next?

# Capacity development

Developing human and institutional capacity should be addressed as a matter of priority in terms of implementing IWRM.

Comprehensive activities of capacity development in the coming years will follow publication of the Guidelines; the Guidelines mainly serve as training material for practitioners.

**2009**

**GLOBAL**  
**UNESCO-IHP COORDINATION**  
(Production of Sequel to Part 2)  
(Networking for action)

**WWAP** <

Host workshop for training programmes  
Enhance assessment capacity development

**UNW-DPC** <

Enhance development of management capacity

**World Bank** <

Support candidates from World Bank  
River Basin projects  
Invite contributing lecturers of the Guidelines to  
assist World Bank related capacity development  
activities on IWRM/IRBM

**ICHARM, ICIWaRM, other Cat I and Cat II Centers** <  
Support scientific knowledge

**2010-12**

**ASIA**

> UNESCO Network and NARBO (ADB, JWA)

> Dispatch experts to actual basins

> Implement training programme  
for water managers



**GWP/INBO IS ALSO PRODUCING AN IWRM HANDBOOK FOCUSED ON BASINS.**

UNESCO and GWP/INBO have been actively coordinating their efforts so that this set of Guidelines and the Handbook complement each other. The Handbook highlights the creation of an enabling institutional framework that promotes key IWRM principles through policy guidance, legislation, and a well-functioning regulatory framework.



PERSPECTIVES IN

## IWRM



# How to use the Guidelines

## IWRM Process – e.g. Phase I

### Phase

#### Recognizing & identifying

- Do you understand the needs and problems? Are you in need of IWRM?
- Are you aware of past evaluation results and the current situation?
- Are you thinking into the future?

### Steps

#### Recognition

What is your key?

#### Identification of problems and needs

#### Public awareness & accountability

#### Capacity building

From  
Implementing,  
monitoring  
& evaluating

To  
Conceptualizing

## KEY for Success in Implementation

Key for Success can be used in  
IWRM succeed at basin level

[1.1.1] Be aware of IWRM efforts in your river basin, region, or country.

[1.1.2] Consider a significant change in the basin as a challenge and recognize and understand such changes as early as possible.

[1.1.3] Ensure broad and long-term perspectives when planning IWRM in your river basin.

[1.2.1] Identify potential priority areas (critical locations) for implementation in the basin.

[1.2.2] Make good use of existing information in the basin.

[1.3.1] Proactive disclosure of information is a fundamental principle of IWRM.

[1.3.2] Facilitate awareness-raising through utilization of media and other familiar to the public, including those usually outside the basin.

[1.3.3] Introduce educational activities on water and IWRM for students and children.

[1.4.1] Develop the capacity of a leader who can recognize problems, develop solutions, and implement them.

[1.4.2] Integrate capacity building and incentives.





Any useful tool for your Key?

## Implementing IWRM

in practice to help  
sin level.

region or country.

(p.18)

a chance to move IWRM forward, and  
possible.

(p.19)

in identifying changes occurring in the  
(p.19)

as and key issues) for IWRM

(p.20)

basin.

(p.21)

mental activity in IWRM.

(p.21)

n of topics, materials and processes  
the water sector.

(p.22)

IWRM, focusing particularly on women  
(p.22)

gnize problems, find necessary  
(p.23)

(p.24)

## Good Examples

How can  
your Key  
overcome  
issues at  
other basin?

Davao River (1)

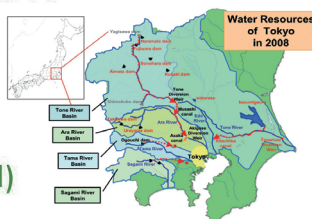
Lake Biwa (2)  
Sacramento – San  
Joaquin River (1)  
Yoshino River (3)

Murray-Darling River  
(3)  
Yoshino River (1), (4)

Negro River (3)  
Tama River (2)  
Yoshino River (1)

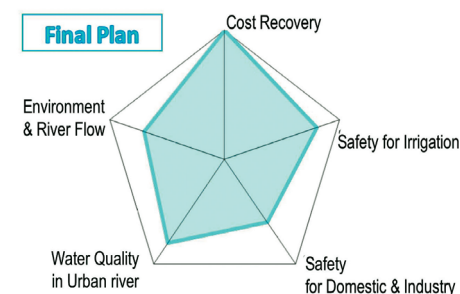
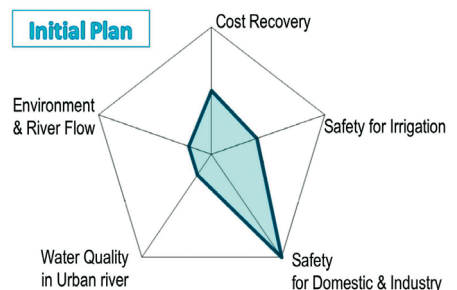
Murray-Darling  
River (2)

Murray-Darling  
River (2)  
Negro River (3)  
Volta River (2)



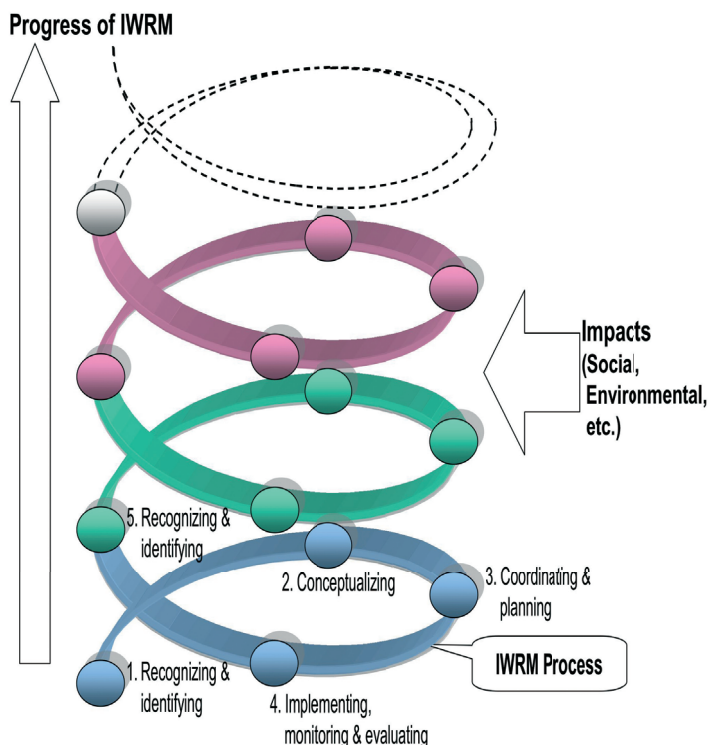
## Useful Tools for Implementing IWRM

Pentagram is a tool for  
comparing alternative plans.





# IWRM Spiral Model



**IWRM is a step-by-step process that takes time.**

By responding to changing social, economic, and environmental needs or impacts practitioners can gradually improve management as they move up the spiral, through such means as progressively developing water resources in the basin, building a more integrated institutional framework, or improving environmental sustainability.

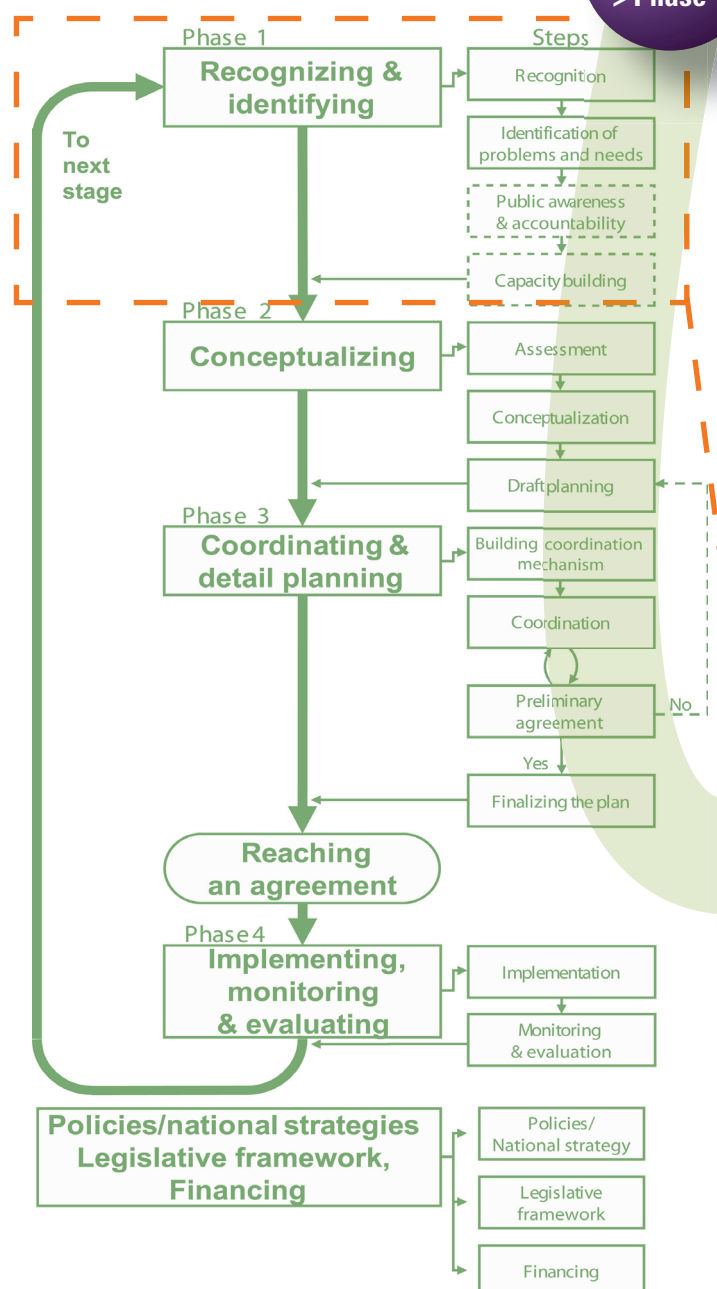
## SECTOR

Sector Perspectives provide insight on what individual sectors are typically thinking. This section may not be complete but the important thing to retain is how other sectors perceive water and how they are related to IWRM.

[e.g. Flood Managers perspective]

Protecting the lives and properties of residents living in the river basin. The interests of the flood management sector (minimizing flood damage), other sectors' potential impact on flood management with respect to IWRM, and the advantages of IWRM, are presented in this section.

Which phase?  
> Phase 1





## Chapter 3

### Key for Success in Implementing IWRM

#### 2.2.2

**It is advisable to start considering mechanisms and courses of action for stakeholder participation during the conceptualization phase.**

- The mechanisms and courses of action for progressively involving various stakeholders in the basin need to be thoroughly considered, otherwise the later process of consensus building could involve many revisions making it time-consuming. Moreover, the agreement reached may become ineffective or may, in the worst case, be overturned.
- Mechanisms for participation may include setting up a committee, public hearings, and workshops. Appropriate forms of participation should be chosen based on local conditions and the relationships among the stakeholders.
  - Planning here does not only mean preparing plans for water-related projects, but also includes planning for the establishment of a coordinating organization like a river basin organization, or new rules, or planning for environmental conservation measures, etc.
  - Involving all stakeholders fairly and equally may not always be ideal. Greater participation forms of participation
- of coordination in a step-by-step and locally appropriate manner. For example, priority stakeholder groups most closely related to the issue/problem can be identified at the beginning, and the involvement of stakeholders can be progressively expanded from therein.
- It is desirable that the coordinator is at least aware of the relationships among stakeholders. Complete knowledge is not necessary, but familiarity with the existing relationships is useful for future coordination. Neglecting this aspect, means that future coordination may take longer.

#### Reference guide

#### Good Examples

- >> Extracted Key for Success from Davao River (1), 'Integrating the fragmented sectors', p.88
- >> Extracted Key for Success from Davao River (2), 'Integrating the fragmented sub-basins', p.89

- >> Extracted Key for Success from Tama River (1) 'Rules for coordination and consensus-building in developing the River Improvement Plan', p.136

#### Useful Tools

- >> Grasping the Positioning of Stakeholders and their Mutual Relationships, p.173

## Chapter 5 Good Examples

### 5.3.2 Extracted Key for Success

#### (1) Extracted Key for Success from Davao River

Reference to 5.3.1 Case Story (Davao River)

#### [Title]

**Integrating the fragmented sectors**

#### [Situation]

**A number of local initiatives started building awareness and capacities in the different river basins in the Davao City**

Major efforts in the development of integrated water resource management (IWRM) had been the focus in the Talomo-Lipadas Rivers, the source of major aquifers that provide 96 per cent of the Davao City Water District's (DCWD) regulated drinking water supply. However, as DCWD only serves 56 per cent of the total population of the city, large populations across the watersheds continue to be unregulated for water supply. Being the largest river basin, the Davao River plays a key role in ensuring water for much of the remaining 44 per cent of the population and is critical for other factors including food production and other ecological services.

#### [Problem]

**The local initiatives were fragmented in the different river basin even though each group is working on limited resources**

Fragmented initiatives only created water quantity and quality problems. Contradictions and conflicts in rules and roles are inevitable as local initiatives evolved their policies and strategies in

## Chapter 6 Useful Tools

### 6.4 GRASPING THE POSITIONING OF STAKEHOLDERS AND THEIR MUTUAL RELATIONSHIPS

Understanding the positioning and relationships of and among stakeholders is useful in laying out strategies for stakeholder involvement effectively and efficiently. Such efficiency is improved further if a key person is identified and involved.

- ✓ To grasp position of each stakeholder and mutual relations
- ✓ To find who is the key person in the stakeholder.
- ✓ Participants will increase as the coordination proceeds.

